



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2015-1130; Directorate Identifier 2015-CE-008-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; DG Flugzeugbau GmbH Gliders**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for DG Flugzeugbau GmbH Model DG-1000T gliders equipped with a Solo Kleinmotoren Model 2350 C engine that would revise AD 2015-09-04. This proposed AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as engine shaft failure and consequent propeller detachment. We are issuing this proposed AD to require actions to address the unsafe condition on these products.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC 20590.

- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Solo Kleinmotoren GmbH, Postfach 600152, 71050 Sindelfingen, Germany; telephone: +49 7031 301-0; fax: +49 7031 301-136; email: [aircraft@solo-germany.com](mailto:aircraft@solo-germany.com); Internet: <http://aircraft.solo-online.com> and DG Flugzeugbau GmbH, Otto Lilienthal Weg 2 / Am Flugplatz, 76646 Bruchsal, Germany; telephone: +49 7251 3020-0; fax: +49 7251 3020-200; email: [wassenaar@dg-flugzeugbau.de](mailto:wassenaar@dg-flugzeugbau.de); Internet: <http://www.dg-flugzeugbau.de/index.php?id=1329>. You may view this referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-1130; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Jim Rutherford, Aerospace Engineer, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4165; fax: (816) 329-4090; email: [jim.rutherford@faa.gov](mailto:jim.rutherford@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2015-1130; Directorate Identifier 2015-CE-008-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

### **Discussion**

On April 22, 2015, we issued AD 2015-09-04, Amendment 39-18150 (80 FR 25591, May 5, 2015). That AD required actions intended to address an unsafe condition on DG Flugzeugbau GmbH Model DG-1000T gliders equipped with a Solo Kleinmotoren Model 2350 C engine and was based on mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country.

Since we issued AD 2015-09-04, Amendment 39-18150 (80 FR 25591, May 5, 2015), new service information has been issued that includes procedures for replacement of excenter axle-pulley assembly and installation of an elastomeric damper element between the propeller and upper pulley. This optional modification will allow resuming engine operation.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued AD No.: 2015-0052R1, dated November 19, 2015 (referred to after this as “the MCAI”), to correct the above-referenced unsafe condition for the specified products. The MCAI states:

An occurrence of engine shaft failure and consequent propeller detachment was reported on a Solo 2350 C engine.

This condition, if not corrected, could lead to additional cases of release of the propeller from the engine, possibly resulting in damage to the sailplane, or injury to persons on the ground.

To address this unsafe condition, EASA issued Emergency AD 2013-0217-E to prohibit operation of the engine. That AD was later revised to introduce an optional modification, through Solo Kleinmotoren Service Bulletin (SB) 4603-14, to install a modified excenter axle-pulley assembly, allowing to resume operation of the engine.

Since EASA AD 2013-0217R1 was issued, another occurrence of engine shaft failure and propeller detachment was reported on a Solo 2350 C engine which had been modified in accordance with Solo Kleinmotoren SB 4603-14.

Consequently, EASA issued Emergency AD 2015-0052-E, which superseded AD 2013-0217R1, to prohibit operation of all Solo 2350 C engines, including those engines which had been modified in accordance with Solo Kleinmotoren SB 4603-14. That AD also required a one-time inspection of the propeller shaft to detect cracks and the reporting of findings.

Since that AD was issued, Solo Kleinmotoren GmbH developed modification drawing nb. 2031211-V2 available for in service application through Solo SB 4603-17 and DG Flugzeugbau GmbH developed modifications drawing nb. 10 M 067, available for in service application through DG Flugzeugbau Technical Note (TN) 1000/26 which include replacement of excenter axle-pulley assembly and installation of an elastomeric damper element between the propeller and upper pulley.

This AD is revised to introduce optional modifications to allow resuming operation of an engine.

You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-1130.

#### **Related Service Information Under 1 CFR 51**

We reviewed Solo Kleinmotoren GmbH Anleitung zur Inspektion (English translation: Inspection Instruction), Nr. 4603-1, Ausgabe (English translation: dated) March 26, 2015; Solo Kleinmotoren GmbH Technische Mitteilung (English translation:

Service Bulletin) Nr. 4603-17, Ausgabe (English translation: dated) July 15, 2015; and DG Flugzeugbau GmbH Technical note No. 1000/26, dated September 23, 2015, with 10M072 titled Propellermontage nach TM 1000-26 (English translation: Propeller assembly TN 1000-26), dated July 14, 2015. Solo Kleinmotoren GmbH Anleitung zur Inspektion (English translation: Inspection Instruction), Nr. 4603-1, Ausgabe (English translation: dated) March 26, 2015, describes procedures for inspecting the propeller shaft for cracking and reporting the results to the manufacturer. Solo Kleinmotoren GmbH Technische Mitteilung (English translation: Service Bulletin) Nr. 4603-17, Ausgabe (English translation: dated) July 15, 2015, describes procedures for replacement of the excenter axle-pulley assembly. DG Flugzeugbau GmbH Technical note No. 1000/26, dated September 23, 2015, describes procedures for removing the excenter axle-pulley assembly and sending it to Solo Kleinmotoren GmbH for modification with a new rear bearing, axle, and elastomeric damper element. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

#### **FAA's Determination and Requirements of the Proposed AD**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with this State of Design Authority, they have notified us of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all information and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

#### **Costs of Compliance**

We estimate that this proposed AD would affect 2 products of U.S. registry. We also estimate that it would take about .5 work-hour per product to comply with the basic operational limitation requirement of this proposed AD. The average labor rate is \$85 per work-hour.

Based on these figures, we estimate the cost of this portion of this proposed AD on U.S. operators to be \$85, or \$42.50 per product.

We also estimate that it would take about 1.5 work-hours per product to comply with the basic axle inspection (remove, inspect, and reinstall) requirement of this proposed AD. The average labor rate is \$85 per work-hour.

Based on these figures, we estimate the cost of this portion of this proposed AD on U.S. operators to be \$255, or \$127.50 per product.

We also estimate that it would take about 2 work-hours per product to comply with the optional axle with drive belt pulley unit replacement and engine test run of this proposed AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$100 per product.

Based on these figures, we estimate the cost of this optional proposed AD action on U.S. operators to be \$540, or \$270 per product.

We also estimate that it would take about .5 work-hour per product to comply with the removal of the operational limitation requirement after doing the optional replacement of this proposed AD. The average labor rate is \$85 per work-hour.

Based on these figures, we estimate the cost of this proposed AD action on U.S. operators to be \$85, or \$42.50 per product.

### **Paperwork Reduction Act**

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB control number. The control number for the collection of information required by this AD is 2120-0056. The paperwork cost associated with this AD has been detailed in the Costs of Compliance section of this document and includes time for reviewing instructions, as well as completing and reviewing the collection of information. Therefore, all reporting

associated with this AD is mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at 800 Independence Ave., SW, Washington, DC 20591. ATTN: Information Collection Clearance Officer, AES-200.

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by removing Amendment 39-18150 (80 FR 25591, May 5, 2015), and adding the following new AD:

**DG Flugzeugbau GmbH:** Docket No. FAA-2015-1130; Directorate Identifier 2015-CE-008-AD.

#### **(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD replaces AD 2015-09-04, Amendment 39-18150 (80 FR 25591, May 5, 2015) (“AD 2015-09-04”).

#### **(c) Applicability**

This AD applies to DG Flugzeugbau GmbH Model DG-1000T gliders, all serial numbers, that are:

- (1) Equipped with a Solo Kleinmotoren Model 2350 C engine; and
- (2) Certificated in any category.

**(d) Subject**

Air Transport Association of America (ATA) Code 72: Engine.

**(e) Reason**

This AD was prompted by mandatory continuing airworthiness information (MCAI) issued by the aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as engine shaft failure with consequent propeller detachment. We are issuing this AD to prevent failure of the engine shaft with consequent propeller detachment, which could result in damage to the glider or injury of persons on the ground.

**(f) Actions and Compliance**

Unless already done, do the following actions:

(1) As of November 25, 2013 (the effective date retained from AD 2013-22-14, Amendment 39-17646 (78 FR 65869, November 4, 2013)), do not operate the engine unless the engine is modified following instructions that are FAA-approved specifically for this AD.

(2) Modification of an engine following the instructions in Solo Kleinmotoren Service Bulletin 4603-14, dated April 28, 2014, is not an acceptable modification to comply with paragraph (f)(1) of this AD.

(3) As of May 26, 2015 (the effective date retained from AD 2015-09-04), place a copy of this AD into the Limitations section of the aircraft flight manual (AFM).

(4) Within the next 30 days after May 26, 2015 (the effective date retained from AD 2015-09-04), do a one-time inspection (magnetic particle or dye penetrant) of the propeller shaft following Solo Kleinmotoren GmbH Anleitung zur Inspektion (English translation: Inspection Instruction), Nr. 4603-1, Ausgabe (English translation: dated) March 26, 2015.

Note 1 to paragraph (f)(4) of this AD: This service information contains German to English translation. The EASA used the English translation in referencing the

document. For enforceability purposes, we will refer to the Solo Kleinmotoren service information as it appears on the document.

(5) Within the next 30 days after May 26, 2015 (the effective date retained from AD 2015-09-04), report the results of the inspection required in paragraph (f)(4) of this AD to Solo Kleinmotoren GmbH. Include the serial number of the engine and the operational time since change of the axle in your report. You may find contact information for Solo Kleinmotoren GmbH in paragraph (h) of this AD.

(6) At any time after the effective date of this AD, you may modify the engine following Solo Kleinmotoren GmbH Technische Mitteilung (English translation: Service Bulletin) Nr. 4603-17, Ausgabe (English translation: dated) July 15, 2015; and DG Flugzeugbau GmbH Technical note No. 1000/26, dated September 23, 2015, with 10M072 titled Propellermontage nach TM 1000-26 (English translation: Propeller assembly TN 1000-26), dated July 14, 2015. This modification allows engine operation.

Note 1 to paragraph (f)(6) of this AD: This service information contains German to English translation. The EASA used the English translation in referencing the document. For enforceability purposes, we will refer to the Solo Kleinmotoren service information and the DG Flugzeugbau GmbH as it appears on the document.

(7) Before further flight after doing the modification allowed in (f)(6) of this AD, remove the AD placed into the Limitations section of the AFM as required in paragraph (f)(3) of this AD.

**(g) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) **Alternative Methods of Compliance (AMOCs):** The Manager, Standards Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Jim Rutherford, Aerospace Engineer, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4165; fax: (816) 329-4090; email: jim.rutherford@faa.gov. Before using any

approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) **Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) **Reporting Requirements:** For any reporting requirement in this AD, a federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

**(h) Related Information**

Refer to MCAI European Aviation Safety Agency (EASA) AD No.: 2015-0052R1, dated November 19, 2015, for related information. You may examine the MCAI on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-1130. For service information related to this AD, contact Solo Kleinmotoren GmbH, Postfach 600152, 71050 Sindelfingen, Germany; telephone: +49 7031 301-0; fax: +49 7031 301-136; email: [aircraft@solo-germany.com](mailto:aircraft@solo-germany.com); Internet:

<http://aircraft.solo-online.com> and DG Flugzeugbau GmbH, Otto Lilienthal Weg 2 / Am Flugplatz, 76646 Bruchsal, Germany; telephone: +49 7251 3020-0; fax: +49 7251 3020-200; email: [wassenaar@dg-flugzeugbau.de](mailto:wassenaar@dg-flugzeugbau.de) Internet: <http://www.dg-flugzeugbau.de/index.php?id=1329>. You may view this referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Issued in Kansas City, Missouri, on January 28, 2016.

Pat Mullen,  
Acting Manager, Small Airplane Directorate,  
Aircraft Certification Service.

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